LM300 Bluetooth Ethernet Access Point

Part Number: LM300

Features

- DIN rail or panel mount   .
- Supports 10/100 Mbps Ethernet
- Supports RS-232, RS-422 and RS-485 serial interface
- Supports LAN and WAN Communications
- In Server mode supports individual client sessions for security
- Management Access password protected
- Virtual COM Drivers for Windows ME/2000/XP/VISTA
- Support socket connection, TCP Server, TCP client, and UDP
- Support upto 8 TCP connection in TCP Server mode
- Heart beat connection ensures reliable TCP connection against power failure or disruption
- Supports loop back mode. Data is looped back for testing connection easily

Overview

The LM300 Bluetooth Ethernet Access Point bridges Serial or Bluetooth devices to the Ethernet LAN/WAN. Existing Serial devices are no longer limited to physical connection to PC COM port. They can be installed anywhere on the LAN using TCP/IP or UDP/IP communication. The LM300 Manager Software installs 2 virtual serial ports on the PC to communicate with the LM300. One serial port is mapped to the physical serial port on LM300 and the other port is mapped to the bluetooth module inside LM300. Hence, the LAN becomes transparent to the serial Device and the software running on PC.
The LM300 can be configured as a TCP or UDP Client/Server. In Direct IP and virtual COM modes, LM300 should be configured as a server. LM300 also offers Heart beat feature to ensure reliable communication.

Direct IP Mode
Direct IP Mode Connections allow the applications using TCP/IP or UDP/IP network socket programs to communicate with the synchronous Serial Port on the LM300. In this type of application the LM300 is configured to TCP or UDP server. The socket program running on the PC establishes a communication connection with the LM300. The raw data is sent directly to and from from the serial port.

Virtual COM Mode
The virtual COM mode requires the installation of a virtual COM port device driver. The LM300 Manager Software installs 2 virtual serial ports in the Device Manager. One serial port is mapped to the physical Serial Port in LM300 and other is mapped to the bluetooth module inside LM300. The PC will act as a host connecting to LM300 when the program opens Virtual COM port.
In this mode, the LM300 must be set either to TCP or UDP server in the menu with a designated Serial Port number. The virtual COM driver is a TCP or UDP client.
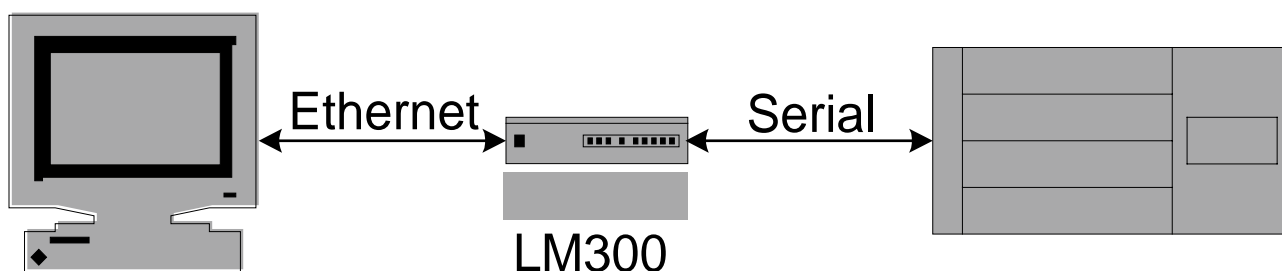
In virtual COM mode, the LAN becomes transparent to the serial device. Applications work just as if the serial device is connected to the host's physical COM port. The virtual COM port converts the application data into IP Packet destined for the LM300, which in turn converts the IP packets back to serial data.

Paired Mode
Paired Mode is also called serial tunneling. When this type of configuration is selected, no additional software is needed to be installed on the host PC. Infact a PC is not required to make the connection. Any two dumb serial devices that can communicate with each other through a serial link will be able to communicate using two LM300 Server and the LAN.
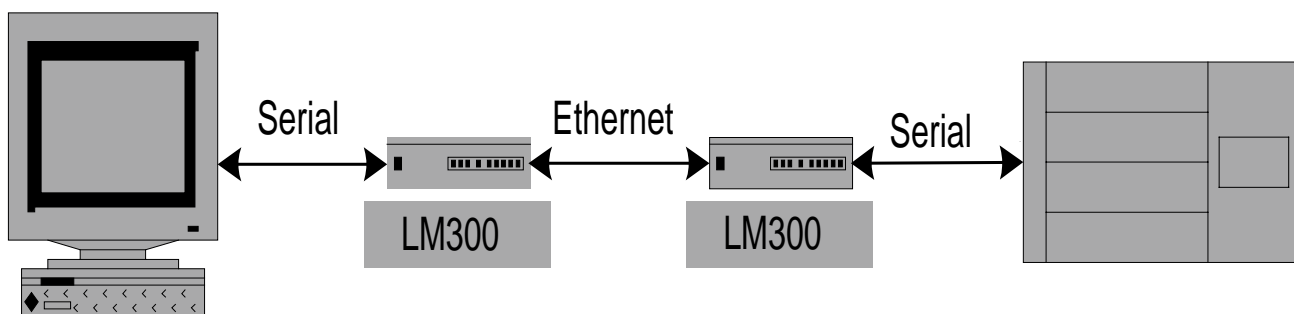
Two LM300s are configured with one setup as a TCP or UDP client and other setup as TCP/UDP server. When setting up the server, the remote IP address section must contain the address of the client. This will allow the Client's IP address to pass the IP address filtering feature of the Server. Coversely, the Remote IP address of the client must contain the Server's IP address.

HeartBeat
The LM300 provides a convenient way to establish a reliable communications between two devices. Communications port 5300 is reserved for the Heartbeat protocol. If loss of connection occurs, the heartbeat protocol lets the LM300 know of a connection failure, hence ensuring reliable communication. If a loss occurs, the Heartbeat feature will try to reconnect the TCP data connection every 5 seconds until communication is established again. The heartbeat feature is available when using Direct IP, Virtual COM or Paired Mode. This is not available when using UDP application.

Specifications
Serial Buffer :
> Output : 64 KBytes
> Input : 8 KBytes per port

Serial Connections :
> DTE - DB9 Male

LAN :
> 10/100 Mbps Auto -detecting - 10 Base T, 100 Base Tx

Serial Interfaces :

> RS232 - Tx, Rx, RTS, CTS, DTR, DSR, GND
> RS422 - Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND
> RS485 - DATA+, DATA-, GND

Data Rate :

110 bps to 230.4 kbps

Parity :

none, even, odd, mark, space

Data Bits :

5,6,7 or 8

Stop Bits :

1, 1.5 or 2

Protocol :

TCP, IP, ARP, DHCP, Telnet, HTTP, UDP, ICMP

Management :

Management Software, Serial Console, Telnet, Web Server, Firmware Upgradable

Dimensions :

3.35x4.5x0.9 in (8.5 x 11.5 x 2.3 cm)

Power Requirement :

9 - 15 V DC
300 mA

Operating Temperature :

0 to 50 C

Storage Temperature :

-20 to 60 C

Humidity :

0 to 90% Non Condensing

Range :

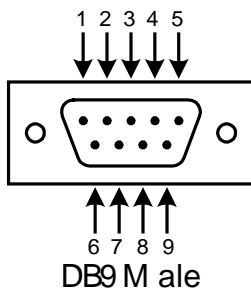100 ft (30 m) Indoors/Urban Range
300 ft (100 m) Outdoors/Open space

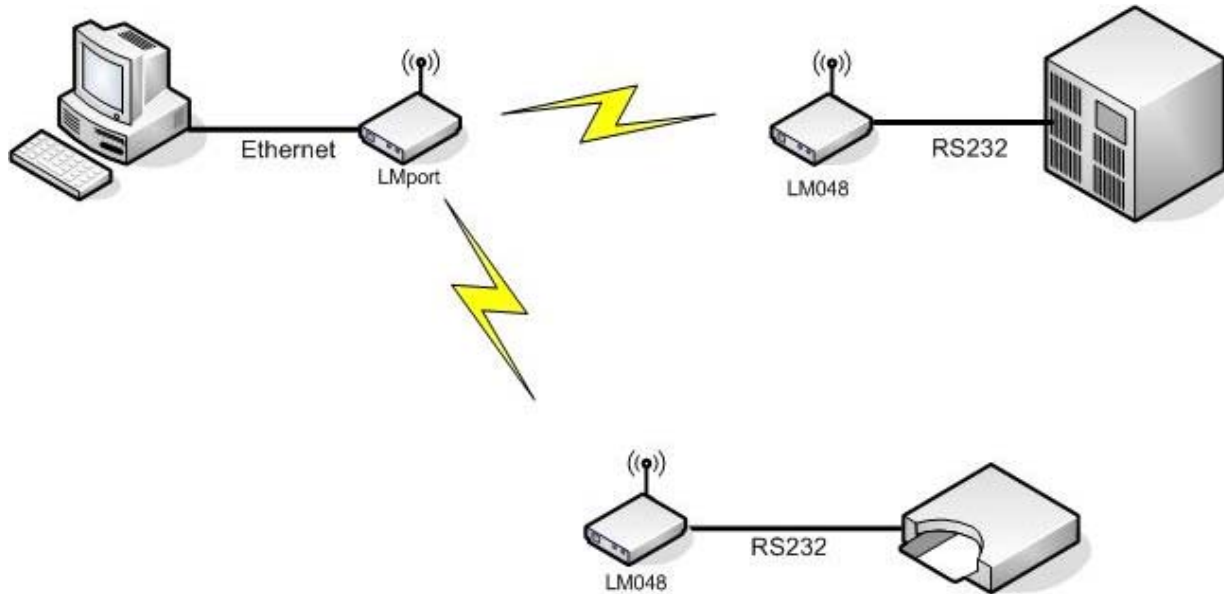Network Topology :

Star

Approvals :

CE, FCC

Pin Assignment

DB9 M ale

DB9M Pin	RS232	RS422	RS485
1	DCD	RX-	--
2	RXD	RX+	--
3	TXD	TX+	DATA+
4	DTR	TX-	DATA-
5	GND	GND	--
6	DSR	CTS-	--
7	RTS	CTS+	--
8	CTS	RTS+	--
9	RI	RTS-	--

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Application Diagram

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